DOCUMENT RESUME

ED 346 317 CE 061 407

AUTHOR	Lankard, Bettina A.
TITLE	Integrating Academic and Vocational Education: Strategies for Implementation. ERIC Digest No. 120.
INSTITUTION	ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, Ohio.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	EDO-CE-92-120
PUB DATE	92
CONTRACT	RI88062005
NOTE	4p.
PUB TYPE	Information Analyses - ERIC Clearinghouse Products (071)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Academic Education; Career Ladders; *Educational Change; High Schools; *Integrated Curriculum; Magnet Schools; Occupational Clusters; Program Implementation; Technological Literacy; *Vocational Education
IDENTIFIERS	ERIC Digests

ABSTRACT

The integration of academic and vocational education is an educational reform strategy conceptualized by vocational educators, supported by the business community, and articulated by policy makers. Integration may improve the educational and employment opportunities of youth. Integration may offer change in an educational system that is in need of reform. The Southern Regional Education Board presented recommendations for raising the academic and technological literacy of high school graduates: vocational students must combine academic and vocational studies; and general curriculum students must study one or more academic areas in depth. All stakeholders must be involved in making changes necessary for reform: curriculum changes, organizational restructuring, and improved relationships with postsecondary education or employment. Eight integration models are as follows: (1) incorporating more academic content in vocational courses; (2) combining teachers to enhance academic competencies in vocational programs; (3) making academic courses more vocationally relevant; (4) curricular alignment; (5) the senior project; (6) the academy model; (7) occupational high schools and magnet schools; and (8) occupational clusters, career paths, and occupational majors. Several elements of success have been identified: vision and commitment; consistent support; funding resources; teacher autonomy; program evaluation; teacher training; and implementation time. (NLA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED346317

Integrating Academic and Vocational Education: Strategies for Implementation

ERIC Digest No. 120

ERIC Clearinghouse on Adult, Career, and Vocational Education

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CE 061407

BEST COPY AVAILABLE

ERIC Clearinghouse on Adult, Career, and Vocational Education

DIGEST NO. 120

Integrating Academic and Vocational Education: Strategies for Implementation

by Bettina A. Lankard

1992

EDO-CE-92-120

The integration of academic and vocational education is an educational reform strategy conceptualized by vocational educators, supported by the business community, and articulated by policy makers in the 1990 Carl Perkins Amendments, which require that federal money be spent on programs that "integrate academic and vocational education . . . through coherent sequences of courses, so that students achieve both academic and occupational competencies" (section 235). It is vocational education's attempt to improve the educational and employment opportunities of youth who will face new technologies and business management systems that demand high-level worker skills. This ***ERIC Digest*** reviews recent literature on the integration of academic and vocational education, highlighting the rationale, goals, and focus of integration efforts and describing eight models of integration and elements necessary for success.

Reasons for Integration

Triggering the reform movement in vocational education are the increasingly high dropout and illiteracy rates, along with employers' criticisms that schools are delivering workers who lack problem-solving abilities, higher-order thinking skills, and communication/employability skills--all crucial for work in a global economy. Vocational educators have been criticized for promoting overly specific training and encouraging a dual structure that segregates vocational and academic education. Academic educators, on the other hand, suffer criticism for providing curriculum that lacks participatory forms of learning and opportunities for students to connect learning to "real world" events (Grubb et al. 1991). In addition, both academic and vocational educators are facing reduced enrollments and program offerings and increased graduation requirements with external pressures for accountability. Thus, the integration of vocational and academic education offers an opportunity to effect change in an educational system that is in need of reform.

The Goals and Focus of Integration Efforts

The Southern Regional Education Board (SREB)--a consortium of 14 member states--was formed to "develop, apply, evaluate, and advance approaches to strengthen students' basic competencies in communications, mathematics, and science, and their critical thinking and problem-solving abilities" (Bottoms and Presson 1989, p. vi). To improve general and vocational education in high school, SREB worked with vocational, government, and business leaders to "investigate over 25 high schools; interview several hundred students, teachers and administrators; review over 2,700 transcripts of high school graduates; assess over 3,100 vocational completers on science; and follow up on over 1,700 vocational graduates one year after completing high school" (ibid.). Their report presents the following recommendations for raising the academic and technological literacy of high school graduates:

- Students pursuing a vocational major should be required to complete a vigorous and coherent program combining academic and vocational study.
- Students in the general curriculum for whom the pursuit of a vocational major is inappropriate should be expected to complete an upgraded program requiring them to study one or more of the academic areas in depth.

Although the goals of all stakeholders in the effort to integrate academic and vocational education are not identical to those of SREB, they generally involve making changes necessary for reform--curriculum changes, organizational restructuring, improved linkages with postsecondary education or employment, and so forth. The State of Ohio, for example, has adopted a curriculum of "applied academics" in which academic and vocational teachers from area vocational schools and comprehensive high schools work together to develop integrated curricula, often teaching as a team. The benefits of such integration efforts are that they can establish relationships among teachers from academic and vocational areas, enable schools to prepare students for clusters of related occupations with varied skill levels, initiate the alignment and sequencing of academic and vocational course content, and encourage the restructuring of curriculum and course sequences along the lines of clusters or career paths.

Models of Integration

Because there are varying purposes, goals, and desired outcomes for integrating academic and vocational education, various innovations and practices are being initiated in schools across the United States. Grubb et al. (1991) identify eight integration models. These models have many variations and suggest new ways for educators to think about integration and about practices that can best help them meet the challenges of reform. A brief description of the models along with their respective benefits and limitations as presented by Grubb et al. (1991) is provided here:

1. **Incorporating more academic content in vocational courses.**

   This approach involves vocational teachers in modifying vocational courses to include more academic content. Benefits include the potential of increasing the academic capacities of students to meet the technical requirements of business, ease of adoption, limited additional expense, and remediation. However, this model does not eliminate the segregation of vocational and academic courses, teachers, or students nor does it affect the academic or general tracks.
2. **Combining vocational and academic teachers to enhance academic competencies in vocational programs.**

   In this model, academic teachers cooperate with vocational teachers in curriculum development and/or teaching to include more academic content in either vocational courses or related applied courses. Benefits include the presence of academic teachers within a vocational program to highlight the importance of academic material and to give in-house remediation to certain students. A limitation of this model is that it requires resources to fund such programs. It also continues to segregate students in vocational or academic tracks and offers some students a relatively low level of academic skills.
3. **Making academic courses more vocationally relevant.**

   Potentially all students (vocational and general track

students) are targeted for this approach that involves academic teachers in modifying courses or adopting new courses to include more vocational content (for example, adopting applied academics). Benefits of this model are that off-the-shelf curriculum materials are available and a coherent sequencing of courses is possible. Limitations of this model are that it changes academic courses but does not touch vocational programs, nor does it encourage cooperation between vocational and academic teachers.

4. **Curricular "alignment": modifying both vocational and academic courses.**

   This approach is designed to change the content of both vocational and academic courses and to consider the sequence of courses rather than viewing courses as individual and independent offerings. It requires cooperation between academic and vocational teachers and fosters team efforts. Benefits of this model are its flexibility, low cost, and potential for coordinating existing teachers and courses rather than requiring new high school configurations. It is an attempt to create a coherent sequence of courses for vocational education students rather than modifying existing individual courses that are independent of each other. A limitation is that the alignment is vertical, leaving the sequence of academic courses unchanged and failing to require regular contact between vocational and academic teachers.

5. **The senior project as a form of integration.**

   This approach involves both academic and vocational teachers in organizing curriculum around student projects. Getting teachers to collaborate in developing new courses or modifying content is the primary benefit. Limitations are that the effects on integration may be small and the vocational content nil.

6. **The Academy model.**

   In this school-within-a-school concept, four teachers typically collaborate and team teach in math, English, science, and the vocational subject that is the core of the Academy. Each group of students studies these subjects with the same team of teachers for two or three years in the Academy and takes all other subjects in the regular high school. Benefits are sustained contact between teachers and students, smaller class size, teacher commitment to the Academy model, and connections with firms who are linked with the program. This model offers substantial opportunity for both horizontal and vertical alignment as teachers can coordinate the topics they teach and adjust the sequence of topics over time. Limitations are that students are frequently segregated in the same ways evidenced through tracking, the process is costly, and it requires restructuring.

7. **Occupational high schools and magnet schools.**

   Occupational high schools have been relatively successful at integrating vocational and academic education, particular when teachers keep in mind the goals of the school and the ambitions of the students. Magnet schools, although involving students interested in specific occupational areas, have not been conducive to integration in that the schools often are involved in solving problems of racial desegration. The benefits of having occupational high schools include the potential alignment of all courses with emphasis on specific occupational areas and opportunity for academic and vocational teachers to collaborate.

8. **Occupational clusters, "career paths," and occupational majors.**

   Occupational clusters can be used within both comprehensive high schools and specialized vocational schools. Teachers usually belong to occupational clusters rather than conventional academic or vocational departments, thus facilitating collaboration. Benefits include the creation of coherent sequences of courses that encourage students to think about occupations early in their high school careers and the bringing together of students from very different backgrounds and with varied ambitions. The career paths offer opportunities for contact with potential employers and with educators at postsecondary institutions. A limitation of this model is that it requires a school with a well-developed vocational program that provides substantial offerings in each of the occupational clusters.

Elements of Success

The appropriate model for each state, district, school, and area must be determined after considering existing programs, local labor markets, and student needs. However, several elements of success have been identified (Stasz and Grubb 1991; Pritz 1989):

- Vision and commitment from all levels
- Consistent support from district administrators and state officials
- New resources for funding
- Autonomy for teachers
- Teacher training and retraining
- Evaluation of efforts
- Adequate time for implementation

For further information on alternative implementation strategies and abstracts of exemplary programs, see Pritz (1989).

REFERENCES

Bottoms, G., and Presson, A. *Improving General and Vocational Education in the High Schools. SREB-State Vocational Education Consortium Approaches for Achieving Gains in the Mathematics, Science, and Communications Competencies of Students in General and Vocational Programs.* Atlanta, GA: Southern Regional Education Board, 1989. (ED 319 950).

Grubb, W. N.; Davis, G.; Lum, J.; Plihal, J.; and Morgaine, C. *"The Cunning Hand, the Cultured Mind": Models for Integrating Vocational and Academic Education.* Berkeley, CA: National Center for Research in Vocational Education, 1991. (ED 334 421).

Pritz, S. G. *The Role of Vocational Education in the Development of Students' Academic Skills: An Implementation Guide. Information Series No. 340.* Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education, 1989. (ED 326 692).

Stasz, C., and Grubb, W. N. *Integrating Academic and Vocational Education: Guidelines for Assessing a Fuzzy Reform.* Berkeley, CA: National Center for Research in Vocational Education, 1991. (ED 334 420).

Developed with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract No. RI88062005. The opinions expressed do not necessarily reflect the opinions or policies of OERI or the Department. *Digests* may be freely reproduced.

CENTER ON EDUCATION AND TRAINING FOR EMPLOYMENT
THE OHIO STATE UNIVERSITY
1900 KENNY ROAD • COLUMBUS, OHIO 43210
Telephone: (614) 292-4353 or (800) 848-4815